

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION

Cave Consulting Group, Inc.,	)	Case No. 5:11-CV-0469 EJD
	)	
Plaintiff,	)	<b>CLAIM CONSTRUCTION ORDER</b>
v.	)	
	)	
Ingenix, Inc.,	)	
	)	
Defendant.	)	
	)	

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Plaintiff Cave Consulting Group, Inc. (“Cave”) brings this suit against Defendant Ingenix, Inc. (“Ingenix”) for infringement of U.S. Patent No. 7,739,126 (“the ’126 patent”). Ingenix denies infringement, and raises counterclaims alleging infringement of eight of its patents: U.S. Patent Nos. 5,835,897 (“the ’897 patent”); 6,370,511 (“the ’511 patent”); 7,620,560 (“the ’560 patent”); 7,774,216 (“the ’216 patent”); 7,725,333 (“the ’333 patent”); 7,979,290 (“the ’290 patent”); 7,222,079 (“the ’079 patent”); and 7,774,252 (“the ’252 patent”).

The parties dispute the proper construction of ten terms used in the claims of these patents. The court held a technology tutorial and claim construction hearing on August 9, 2012. Upon consideration of the claims, specifications, prosecution histories, and other relevant evidence, along with supplemental briefing filed by the parties, and after hearing the arguments of the parties, the court construes the contested language of the patents-in-suit as set forth below.

## 1. TECHNOLOGY OVERVIEW

The parties are competitors offering healthcare provider efficiency measurement software to the healthcare industry. The patents-in-suit relate to the sorting of healthcare claims data into meaningful groups and using those groupings to evaluate physician efficiency. Ingenix’s technology, the Symmetry Episode Treatment Grouper (“Symmetry ETG”) is based on the patents

of two inventors: Dennis Dang and Jerry Seare. Ingenix Opening Br. 1-2, Dkt. No. 66. The Dang and Seare patents focus on sorting massive healthcare data into meaningful groups based on appropriate time windows. Id. at 2. These patents focus exclusively on grouping technology and do not address physician efficiency measurement. Cave's product, the Cave Marketbasket, is based on Dr. Doug Cave's '126 patent. Cave Opening Br. 2, Dkt. No. 64. This patent describes a way to evaluate a physician's performance relative to that of his or her peers, accomplished by first creating meaningful groups of medical claims data and then by analyzing those groups to measure physician efficiency. Id. at 2. Cave's patent thus addresses both the grouping and the efficiency measurement technology.

## 2. LEGAL STANDARD

Claim construction is a question of law to be decided by the court. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir. 1995) (en banc), aff'd 517 U.S. 370 (1996). Patent claims are construed in the manner that "most naturally aligns with the patent's description of the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed.Cir. 2005) (quoting Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed.Cir. 1998)). Claim terms are given their ordinary and customary meaning, which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Phillips, 415 F.3d at 1312-13. The person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Id. at 1311; see also Markman, 52 F.3d at 979 (claims must be read "in view of the specification, of which they are a part").

Claims may be construed using both intrinsic and extrinsic evidence. Intrinsic evidence includes the language of the claims themselves, the patent specification, the prosecution history, and any other statements made by the patentee to the United States Patent and Trademark Office regarding the scope of the invention. Extrinsic evidence includes dictionaries, technical treatises, and testimony from experts or inventors. Extrinsic evidence may be used if the sources are "helpful in determining the true meaning of language used in the patents." Phillips, 415 F.3d at

1318 (internal quotation omitted). However, extrinsic evidence may not be used to contradict the meaning of a claim term as derived from intrinsic sources. Phillips, 415 F.3d at 1322-23.

### 3. CONSTRUCTION OF DISPUTED TERMS

#### 3.1. Disputed Terms in the Cave '126 Patent

##### 3.1.1. "Weighted Episode of Care Statistics"

<u>Cave</u>	<u>Ingenix</u>
Cost or length of care statistics for a group of medical conditions calculated using the relative importance of each condition to the others of the group	Statistics for an episode of care that are adjusted based on predetermined weight factors that are assigned to each medical condition, the weight factors reflecting the relative importance or relevance of the medical conditions

The '126 patent uses "marketbaskets" to evaluate physician efficiency. Each category of physician has its own marketbasket which reflects the universe of medical conditions that a physician of that specialty is most likely to treat. Cave Reply Br. 6, Dkt. No. 71. Each medical condition is assigned a weight, which reflects the prevalence of that condition in that particular marketbasket. Id. Episodes of care are multiplied by these weights to generate weighted average statistics for the marketbasket as a whole. Id. This approach allows physicians within the same specialty to be compared, even if those physicians treat different case mixes.

The parties dispute whether these assigned weights, i.e. the "weighted episode of care statistics," must be "predetermined." The preferred embodiment teaches that marketbasket weights are predetermined values that are loaded into the system. Id. This approach to weighting is called indirect standardization. However, the '126 patent also claims a direct standardization approach in which the weights are assigned based on the actual mix of medical conditions treated by a physician or his/her peer group as reflected by the data loaded into the system. Id. at 7. Ingenix contends that indirect standardization is essential to the construction of this term because Dr. Cave

1 disclaimed direct standardization. Cave argues that the file history does not contain any disclaimer,  
2 and that imposing the limitation of predetermined weight factors would effectively invalidate nine  
3 dependent claims in the '126 patent which rely on direct standardization.

4 Ingenix contends that the nine dependent claims relying on direct standardization have no  
5 support in the specification, and thus the doctrine of claim differentiation should not preclude the  
6 court from construing “weighted episode of care statistics” to be limited to indirect standardization.  
7 Dr. Cave filed his patent application for the '126 patent on March 5, 2004. Several years later, on  
8 October 22, 2009, Dr. Cave filed an amendment that, inter alia, added the dependent claims  
9 reciting direct standardization. JA 3338-3358. The patent examiner rejected these claims as  
10 indefinite on January 21, 2010. JA 3408. Dr. Cave responded, describing how the claims utilize  
11 direct standardization. JA 3464. In that same exchange, the patent examiner also rejected claims  
12 reciting indirect standardization as indefinite, to which Dr. Cave directed the examiner’s attention  
13 to the patent specification to illustrate how the claims used indirect standardization. The examiner  
14 ultimately withdrew the indefiniteness rejection on both the direct and the indirect standardization  
15 claims and on June 15, 2010 the '126 patent issued.

16 Ingenix highlights this background not to argue that Dr. Cave disclaimed direct  
17 standardization in the prosecution history,<sup>1</sup> but to show that the nine claims relying on direct  
18 standardization are insufficiently supported in the patent specification. Because Dr. Cave directed  
19 the examiner’s attention to the patent specification to overcome the indefiniteness rejection for the  
20 indirect standardization claims, but could not point to any support in the specification to explain  
21 direct standardization, Ingenix contends that the nine dependent claims simply cannot be  
22 supported. Considering this background, Ingenix asks the court to view the nine dependent claims  
23 relying on direct standardization as a “nullity” because they were improperly added as “new  
24 matter” five years after the original patent application. See Ingenix Supplemental Br. 2, Dkt. No.

25 \_\_\_\_\_  
26 <sup>1</sup> If Ingenix did intend to argue that this exchange constituted a disclaimer, its argument would fail. It is clear  
27 that Dr. Cave intended both direct and indirect standardization to be claimed in the '126 patent. The purpose of this  
28 exchange was to explain and support both direct and indirect standardization so that a patent reciting both methods  
would issue. Therefore, the court finds no “clear and unmistakable disavowal of scope” which would preclude direct  
standardization. Grober v. Mako Products, Inc., 686 F.3d 1335, 1341 (Fed. Cir. 2012) (citing Comp. Docking Station  
Corp. v. Dell, Inc., 519 F.3d 1366, 1374-75 (Fed. Cir. 2008)).

80 (explaining that the nine dependent claims reciting direct standardization were added five years after the initial patent application was filed); 35 U.S.C. § 132(a) (prohibiting amendments from introduction of new matter into the disclosure of the invention). Ingenix’ briefing treats these claims as a nullity in its remaining arguments regarding direct standardization. Thus, Ingenix essentially asks the court to first determine what significance, if any, the dependent claims relying on direct standardization have before it construes this term. The court declines to do so. Arguments regarding “new matter” are directed at invalidity, an issue that is not properly before the court here. See 35 U.S.C. § 282(b)(2) (an invalidity defense may be based on any ground specified in part II of Title 35). Ingenix’ remaining arguments all require the court to read out the nine dependent claims relying on direct standardization. Claims, even later-added dependent claims, are presumed valid (35 U.S.C. § 282) and “are generally construed so as to sustain their validity” (Becton, Dickinson and Co. v. Tyco Healthcare Gr., LP, 616 F.3d 1249, 1255 (Fed. Cir. 2010) (citing Whittaker Corp. v. UNR Indus., Inc., 911 F.2d 709, 712 (Fed. Cir. 1990))). For this reason, each of Ingenix’ remaining arguments fails.

First, Ingenix contends that Dr. Cave’s criticism of direct standardization precludes the court from broadening the construction of this term beyond predetermined weight factors. Ingenix points to the fact that the original ’126 patent application did not include any claims or preferred embodiments that relied on direct standardization, and in fact only referenced that method in the form of criticism in the “Background of the Invention” section. Generally, “when the scope of the invention is clearly stated in the specification, and is described as the advantage and distinction of the invention, it is not necessary to disavow explicitly a different scope.” On Demand Machine Corp. v. Ingram Industries, Inc., 442, F.3d 1331, 1340 (Fed. Cir. 2006). Ingenix points to several cases in which the Federal Circuit found a patentee’s criticism to operate as a disclaimer. See Honeywell Int’l, Inc. v. ITT Indus, Inc., 452 F.3d 1312, 1319 (Fed. Cir. 2006); SciMed Life Sys. Inc. v. Advanced Cardiovascular Sys. Inc., 242 F.3d 1337, 1341-45 (Fed. Cir. 2001). However, each of these cases address the question of whether or not to broaden a claim term to include an element not otherwise present in any of the patent’s claims. In contrast, the inventor here criticized an element that later became essential to numerous dependent claims. The court sees no reason to

1 depart from the general principle that claims are to be construed so as to preserve their validity.  
 2 See 35 U.S.C. § 282.

3 Second, Ingenix points to Dr. Cave's statement that "[t]he system of the present invention  
 4 uses an indirect standardization technique" to suggest that Dr. Cave intended to exclude direct  
 5 standardization from the scope of his claims. '126 patent 92:36-37. While a patentee's statement  
 6 that a certain feature is part of the "present invention" can provide "strong evidence that the claims  
 7 should not be read to encompass the opposite structure," (Scimed, 242 F.3d at 1343), when such a  
 8 statement conflicts with other portions of the specification, it does not necessarily serve as a  
 9 limitation on a patent's claims (see Absolute Software, Inc. v. Stealth Signal, Inc., 659 F.3d 1121,  
 10 1136-37 (Fed. Cir. 2011)). In this case, the '126 patent specification does not uniformly refer to  
 11 indirect standardization as the "present invention." Rather, it appears that the inventor used this  
 12 phrase in describing the preferred embodiment. '126 patent 92:39-41. Interpreting Dr. Cave's  
 13 statement to preclude direct standardization would conflict with other portions of the patent,  
 14 namely, the nine dependent claims that rely on direct standardization. Therefore, the court finds  
 15 that Dr. Cave's statements regarding "the present invention" did not operate as a disclaimer.

16 "Quite apart from the written description and the prosecution history, the claims themselves  
 17 provide substantial guidance as to the meaning of particular claim terms." Phillips, 415 F.3d at  
 18 1314. The court finds the '126 patent itself instructive here. To construe "weighted episode of  
 19 care statistics" as being limited to "predetermined" weights would essentially read out the nine  
 20 dependent claims that rely on direct standardization. Therefore, the court rejects Ingenix' proposal  
 21 and adopts the Cave construction.

## 22 Construction

23 The court adopts Cave's construction. "Weighted Episode of Care Statistics" shall mean  
 24 "cost or length of care statistics for a group of medical conditions calculated using the relative  
 25 importance of each condition to the others of the group."  
 26  
 27  
 28

### 3.1.2. “Determining Eligible Physicians and Episode of Care Assignments”

<u>Cave</u>	<u>Ingenix</u>
Filtering to identify physicians or episode of care assignments that satisfy criteria for a particular report group	Plain meaning/ <i>determining physicians who meet eligibility criteria and determining assignments of physicians to episodes of care</i>

The term “determining eligible physicians and episode of care assignments” is found in both the claims and the specification of the ’126 patent. Cave argues that this term is “nuanced” and that construction is necessary “to help the jury understand the functionality of Dr. Cave’s inventive method.” Dkt. No. 64 at 12. Ingenix maintains that the plain meaning should apply because Cave’s proposed construction is an attempt to re-write the claim term and would render other claim language superfluous.

A claim term generally is given its ordinary and customary meaning as it would have been understood by a person of ordinary skill in the art in question at the time of the invention. Phillips, 415 F.3d at 1312-13. “[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” Id. at 1313. The court has reviewed this term in the context of the ’126 patent and finds that its ordinary meaning as understood by a person of ordinary skill in the art would include nothing more than the plain language of the term.

Each time the term appears, it is immediately followed by an explanation of how it operates. For instance, the term appears as the title of Step 13 in the patent specification. By the time this step is performed, claims data has already been grouped into episodes of care and those episodes have been assigned to treating physicians. ’126 patent 50:48-51:38, 66:15-68:16. Step 13 provides:

This step involves three main functions. The first function is to filter or eliminate physicians with an assigned specialty type that cannot be assigned to one of the 31 marketbaskets. For example, there is no radiologist marketbasket, so radiologists would be



1 removed by this rule. The second function is to eliminate physicians that are not in a report  
2 group of interest...The third function is to filter out episode assignments not in a  
3 marketbasket.

4 '126 patent 72:63-73:10.

5 Similarly, the term is explained in Claim 1 of the '126 patent, which recites

6 Determining eligible physicians and episode of care assignments utilizing the computer  
7 system comprising:

8 Eliminating episode of care assignments to physicians not meeting a selected  
9 criterion for the report group of interest....

10 '126 patent 109:29-33.

11 And again, in Claim 9 of the '126 patent:

12 The method in claim 1 wherein determining eligible physicians and episodes of care  
13 assignments further comprises:

14 Eliminating physicians from the report group, said eliminated physicians having  
15 specialties that are not assigned to a grouping of medical conditions that account for  
16 some episodes of care treated by a physician having a specific specialty type.

17 '126 patent 110:1-8.

18 The thorough explanations that immediately follow whenever this term appears resolve the parties'  
19 dispute. See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd., 521 F.3d 1351, 1361 (Fed.  
20 Cir. 2008) (finding that a determination that a claim term "needs no construction" or has the "plain  
21 and ordinary meaning" may be inadequate when a term has more than one "ordinary" meaning or  
22 when reliance on a term's "ordinary" meaning does not resolve the parties' dispute). From these  
23 explanations, it is clear that the invention filters out and eliminates physicians and/or episodes of  
24 care not meeting a report group's criteria. The invention separately addresses physicians and  
25 episodes of care, and either or both can be filtered out or eliminated.

26 Given the consistent explanation of this term throughout the '126 patent, the court finds that  
27 the jury will likely not be confused by its plain meaning. Indeed, additional construction could  
28 render the term more confusing by requiring the jury to cross reference the court's construction



with the explanations already provided in the patent. Therefore, the court agrees with Ingenix and declines to construe this term. The ordinary meaning of the term “determining eligible physicians and episode of care assignments” shall apply.

### 3.1.3. “Maximum Duration Rule”

<u>Cave</u>	<u>Ingenix</u>
A time-based rule used to group claim data pertaining to a patient’s medical condition(s) into an episode(s) of care	Plain meaning/ <i>a rule that defines a maximum time period</i>

The term “maximum duration rule” appears in the ’126 patent and describes a rule that controls the duration of episodes of care. Ingenix argues that the plain meaning of the term should be applied because the jury will not be confused by the words “maximum,” “duration,” or “rule.” Dkt. No. 66 at 22. Cave contends that the plain meaning of the term does not accurately capture its meaning.

“In some cases, the ordinary meaning of claim language ... may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” Phillips, 415 F.3d at 1314. However, in certain cases, the meaning of a claim term as understood by a person of ordinary skill in the art is not readily apparent. Id. Such is the case here. While the individual words “maximum,” “duration,” and “rule” are readily understood, when used together in the ’126 patent, they comprise a term to which a person of ordinary skill in the art would attribute a special meaning.

Ingenix argues that Cave’s proposed construction is improper because it strips out the requirement that the maximum duration rule be based on a “maximum” length of time, and broadens the term to include any time-based rule. Cave does not directly address this argument, but asserts that “the maximum duration rule can define episodes of care based on either a fixed or dynamic time window” and that “the maximum allowable duration may be varied.” Dkt. No. 71 at 13 (quoting ’126 patent 51:35-38). While these statements are accurate, they do not disprove the

1 assertion that “maximum” durations, and not simply time-based durations, are at issue in this term.  
 2 Based on the patent specification and claims, the court has determined that a “time-based rule” is  
 3 too broad a construction for this term.

4 As the patent specification and claims make clear, the maximum duration rule is used to  
 5 control the formation of episodes of care based on the maximum number of days in a  
 6 predetermined time window. The patent specification provides that “a medical condition’s window  
 7 period is based on the maximum number of days between contact with a provider for which follow-  
 8 up care is still reasonable” and goes on to explain that each condition “has its own unique window  
 9 period.” ’126 patent 51:10-15 (emphasis added). The patent claims describe the maximum  
 10 duration rule’s use of these “unique window periods.” Particularly, Claim 11 states:

11 The method of claim 1 wherein:

12 The first maximum duration rule includes claims from a first claim date for a prespecified  
 13 number of days; and

14 The second maximum duration rule includes claims from a first claim date as long as a  
 15 number of days between consecutive claims does not exceed a prespecified window.

16 ’126 patent 110:13-19 (emphasis added).

17 As used in this claim, the maximum duration rule limits an episode of care to a prespecified  
 18 window and restricts adding other claims to that episode of care outside of the prespecified  
 19 window. The use of the maximum duration rule thus depends on a maximum number of days  
 20 assigned to each medical condition and this concept must be included in the term’s construction.

21 Ingenix also argues that Cave’s inclusion of the grouping of claims data into episodes of  
 22 care in the construction of this term is improper because such grouping is expressly addressed in  
 23 separate claim language. Cave argues that the specification and claims make clear that the  
 24 “maximum duration rule” is used to regulate the formation of episodes of care, and thus to  
 25 understand the term, this language must be included in the construction. The court agrees with  
 26 Cave. This term cannot be properly understood without a reference to its use in building episodes  
 27 of care because that concept appears to be inextricably entwined with the rule itself. Thus, the  
 28 inclusion of grouping in the term’s construction is proper.

Construction

The court adopts a modified version of Cave’s construction. “Maximum Duration Rule” shall mean “rule based on a maximum time period(s) that is used to group claim data pertaining to a patient’s medical condition(s) into an episode(s) of care.”

**3.2. Disputed Terms in the Ingenix Patents**

**3.2.1. “Validate/Validated/Validating”**

<u>Cave</u>	<u>Ingenix</u>
Verifying through look-up tables the existence of a predetermined relationship between a particular diagnosis code and a particular treatment code, and discontinuing the processing of unverified claim data	Plain meaning/ <i>verify or confirm that something is valid</i>

The term “validate” and variations thereof appear at least in Claim 1 of the ’897 patent (“(b) validating each of the at least one of a plurality of data records for at least one of a diagnosis code and a treatment code” and “(d) grouping the validated at least on of a plurality of data records to an episode treatment category based upon the pre-defined relationship”) and Claim 1 of the ’511 patent (“(b) validating each of the at least one of a plurality of data records for a valid drug code.”). Ingenix argues that “validate” is not a term of art and therefore does not require construction. Cave argues that the plain meaning of the term would be misleading to the jury, as it is divorced from the context of the invention. Cave proposes three limitations to the term validate: 1) look-up tables, 2) a predetermined relationship between a particular diagnosis code and a particular treatment code, and 3) a discontinuation of the process for invalid claim data. The court will look at each of these limitations in turn.

First, Cave argues that because the patent specification teaches that look-up tables are used to verify the relationship between diagnosis and treatment codes, the construction of validate must include look-up tables. Ingenix argues that use of look-up tables is simply described as a preferred

embodiment, and that including a reference to look-up tables in the construction of validate would improperly narrow the scope of its claim.

While the specification is “always highly relevant,” Phillips, 415 F.3d at 1313, courts “must not import limitations into the claims from the specification.” Trading Techs. Int’l, Inc. v. eSpeed, Inc., 595 F.3d 1340, 1352 (Fed. Cir. 2010) (citing Abbott Labs. v. Sandoz, Inc., 566 F.3d 1282, 1288 (Fed. Cir. 2009)). “Although the specification often describes very specific embodiments of the invention, [the Federal Circuit] ha[s] repeatedly warned against confining the claims to those embodiments.” Phillips, 415 F.3d at 1323 (citing Nazomi Communications, Inc. v. ARM Holdings, PLC, 403 F.3d 1364, 1369 (Fed. Cir. 2005) (claims may embrace “different subject matter than is illustrated in the specific embodiments in the specification”)). In fact, courts must take care to avoid limiting claim language to a disclosed preferred embodiment, “unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’” Liebel–Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 906 (Fed. Cir. 2004) (quoting Teleflex, Inc. v. Ficoso N. Am. Corp., 299 F.3d 1313, 1327 (Fed. Cir. 2002)); see also Acumed LLC v. Stryker Corp., 483 F.3d 800, 807 (Fed. Cir. 2007) (finding that a claimed “transverse” hole in a bone nail was not limited to the particular “perpendicular” orientation shown in the preferred embodiment because the claim language allowed for a broader interpretation).

Here, the patentee showed no clear intention to limit the claim scope to a validation process using only look-up tables. The patent specification teaches the use of look-up tables as a preferred embodiment, but neither the specification nor the file history suggests that look-up tables comprise the exclusive embodiment. Nor has Cave pointed to any evidence supporting its assertion that the data can be verified only by reference to look-up tables. To construe validate to include a reference to look-up tables thus would be to include an unnecessary limitation, based on the preferred embodiment, in the construction of this term. This court declines to do so.

Second, Cave asserts that the treatment and diagnosis codes in the medical claims data are validated on the basis of a predetermined relationship between those codes, and that validate cannot be properly understood without including these predetermined relationships in its construction. Ingenix argues that the language teaching those predetermined relationships flows

1 not from validate, but from the language later in the claim, and thus that including predetermined  
2 relationships in the construction of validate would impose improper limitations on the term.

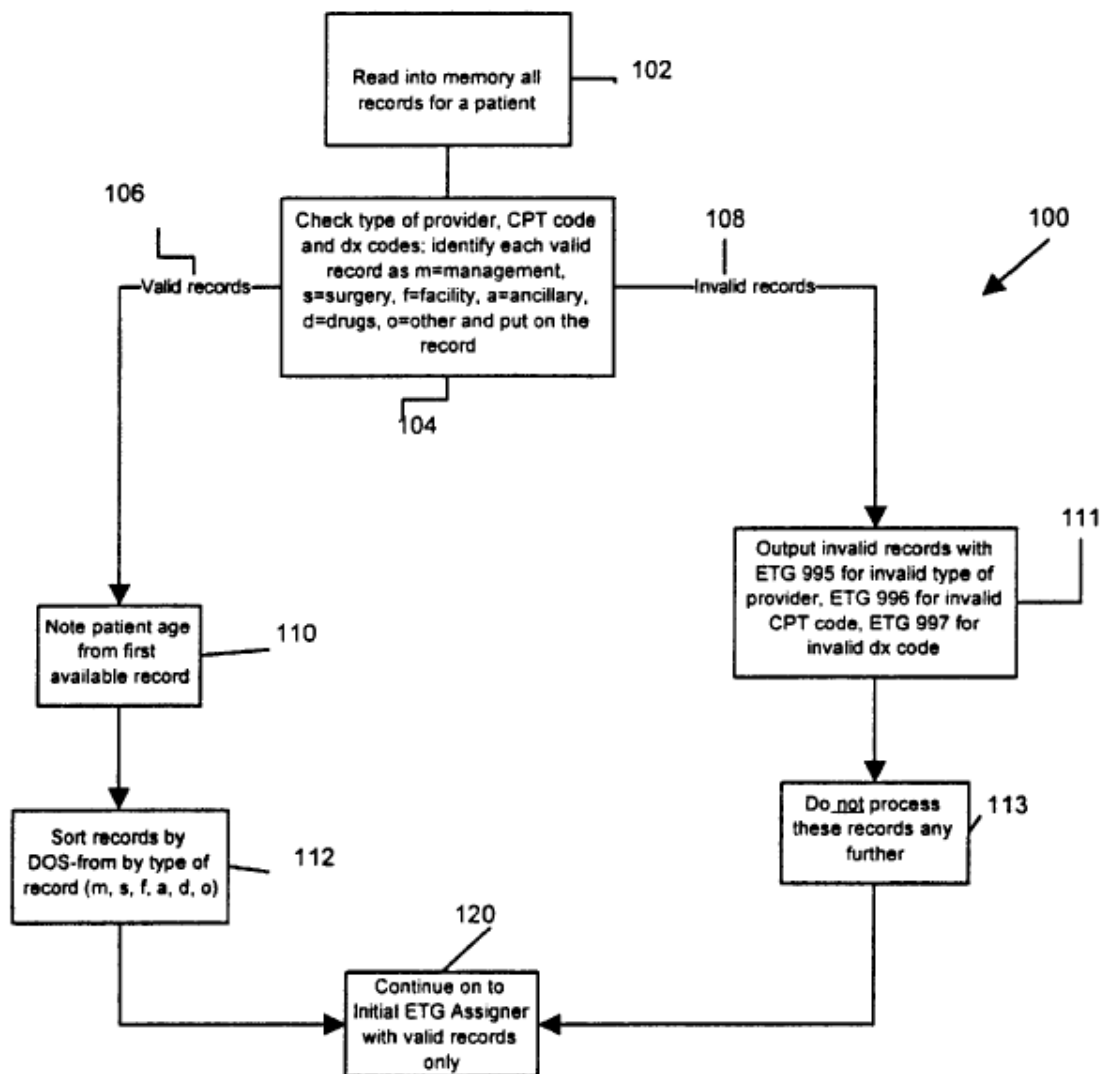
3 Step (b) of Claim 1 describes the validating step: “validating each of the at least one of a  
4 plurality of data records for at least one of a diagnosis code and a treatment code.” As Ingenix  
5 points out, the predetermined relationships appear in the following step, step (c) of Claim 1:  
6 “reading at least one pre-defined relationship between the at least one of a diagnosis code and a  
7 treatment code.” From the language and order of the claim, it does not appear that a predetermined  
8 relationship is necessary to the validation step described in step (b). Rather, the predetermined  
9 relationship is read after the validating step is performed. Because the relationship flows from a  
10 separate step in the claimed methods, it would be improper to conflate the two by including  
11 predetermined relationships in the construction of validate.

12 Including predetermined relationships between treatment and diagnosis codes in the  
13 construction of validate would also be improper because it would create inconsistent meanings of  
14 the term across the patent family. Claim 1 of the ’551 patent covers “(b) validating each of the at  
15 least one of a plurality of data records for a valid drug code.” Validate, as used in this claim, does  
16 not relate to treatment and diagnosis codes, but rather to drug records. Cave proposes an  
17 alternative construction for validate as it appears in the ’511 patent: “verifying through look-up  
18 tables whether a particular drug code can be assigned to an open episode treatment group, and  
19 discontinuing the processing of any drug codes that cannot be so assigned.” Construing the same  
20 term in two different ways would not only be unnecessarily confusing but also inappropriate. The  
21 ’511 patent and ’897 patent are members of the same patent family. Dkt. No. 66 at 4. Given this  
22 relationship among the patents, the court should construe the terms consistently across the entire  
23 patent family. See Omega Eng’g, Inc. v. Raytek Corp., 334 F.3d 1314, 1334 (Fed. Cir. 2003)  
24 (“[W]e presume, unless otherwise compelled, that the same claim term in the same patent or  
25 related patents carries the same construed meaning.”). The court thus declines to adopt Cave’s  
26 limitation because including predetermined relationships between diagnosis and treatment codes in  
27 the construction of validate would create a construction that is inapplicable to the term as it is used  
28 in other claims in the same patent family.

Third, Cave argues that because the patent teaches that unvalidated claim records are not processed, the termination of processing of unverified claims data must be included in the construction of validate. Ingenix asserts that in doing so, Cave is attempting to append an entirely separate step into a simple claim term.

The parties both point to Figure 3 of the '897 patent:

**Fig. 3**



The specification describes this figure as “a flow diagram illustrating an Eligible Record Check routine which validates and sorts patient claim data records.” ’897 patent 8:9-11. According to

this figure, validation occurs at step 104, and discontinuation of invalid records occurs at step 113. The figure also depicts a number of other steps, including steps relating to loading the claims data into the system (step 102), and the process to follow for valid claims data (steps 106, 110, 112, 120).

It is clear that this figure describes an entire process, of which validation is only one part. Cave does not suggest that this court import other steps such as loading claims data or processing of validated records into the construction of “validate.” Yet Cave insists that including the discontinuation step is essential to the construction of this term. Cave fails to explain why it has selectively suggested including the discontinuation step while ignoring others. This court finds that it would be wholly inappropriate to selectively import the discontinuation step into the construction of validate. Doing so would result in a bloated, misleading construction of an otherwise straightforward term.

The court agrees with Ingenix that no further construction of the term validate is necessary. The word validate connotes a process of checking to ensure something is valid or acceptable. As used in the claims, validate means nothing more than its plain meaning. The term is thus sufficiently clear, and the court will not construe it.

### 3.2.2. “Shift/Shifting/Shifted”

<u>Cave</u>	<u>Ingenix</u>
When the next claim line item processed indicates a change from a first to a second clinical condition, the episode is moved to that second clinical condition	Plain meaning/ <i>to move, as in from one group to another</i>

The ’897 patent family’s invention addresses changes in clinical condition through shifting. The term “shift” is found in several claims of the ’897 patent family, including dependent Claim 23, which recites “shifting a medical episode to a different medical episode treatment category based upon changes in patient condition comprising at least one of comorbidity, complication and



defining surgery.” Ingenix argues that the plain meaning of shift is sufficient to understand the claim language. Cave argues the plain meaning ignores that shifting only occurs when the next claim line item indicates a change in clinical condition, and that that change is from a “first” clinical condition to a “second” one.

To support its suggested limitations, Cave points to several portions of the prosecution history in which Mr. Dang, the inventor, describes shifting as moving an episode from one episode treatment group to another based on later presented claims data. Particularly, the prosecution history contains the following descriptions:

- “Mr. Dang conceived of a new ETG construct that first chronologically groups each claim record into an ETG episode having a specific clean period, and then, if a later presented claim record warrants, based upon the diagnosis or treatment code on the later presented claim, potentially shifts the episode into another ETG to reflect the patient’s changed condition.” JA 553.
- “The version of the ETG Program which existed as of July 1994 did not include the features of an episode having dynamic windows of time during which medical claims having dates of service within the dynamic time window time frame could continue to group to the episode and possibly shift the episode from one ETG identifier to another ETG identifier upon changes in clinical condition.” JA 561, Dang Aff. ¶ 4.

The court agrees with Cave that shifting cannot be understood without a reference to changing clinical conditions. However, the court disagrees with the specific limitations that Cave proposes. Neither the claim language nor the prosecution history demonstrate that the triggering event need be anything more than later claims data showing a change in clinical condition. Cave does not present evidence that the claims data is already sorted in any particular fashion that would make the “next” claim line item and only the “next” claim line item meaningful. Cave’s suggestion that shifting is triggered by “the next claim line item” thus presents too narrow a limitation.

Similarly, Cave’s proposal that shifting occurs from “a first to a second clinical condition” reads too much into the descriptions of shifting found in the claim language and prosecution

history. These descriptions merely reference a shift from one clinical condition to another. The “first” and “second” limitations therefore have no support within the file history.

### Construction

The court adopts a modified version of Cave’s construction. “Shift/Shifted/Shifting” shall mean “when later processed claims data indicates a change from one clinical condition to another, the episode is moved to the later clinical condition.”

### **3.2.3. “Reset/Resetting”**

<u>Cave</u>	<u>Ingenix</u>
When the next claim line item processed has a date of service within the defined time period and associated with the episode, the defined time period starts over	Plain meaning/ <i>restoring an original condition or value of the thing that is reset, e.g., in the context of a dynamic time window, restoring the time window to zero and restarting the time window</i>

The term “reset” appears throughout the Dang patents and describes a way of increasing the period of time assigned to an episode. Ingenix argues that the term has a clear meaning, and therefore no construction is necessary. Cave argues that the plain meaning of reset would be misleading, because the term applies particularly to a slide in the predefined time window based on a change in claims data. To address this concern, Cave proposes adding two limitations to the construction of reset, namely, a triggering event and a predefined time period.

Ingenix’ technology assigns a time period to each episode. For example, claims data reflecting treatment for an upper respiratory infection is grouped to an episode assigned a 30 day time period. When later processed claims data is added to an episode, the time period for that episode “resets” to account for the new claims data. See ’897 patent 19:11-14. The episode can be reset to account for an increase in severity in the patient’s condition or for a recurrence of the same condition. In either scenario, the time period is reset to 0, and counts up to the new time period.

When the later processed claims data shifts the episode of care to a more severe condition, the time period “resets” to the time period for the new condition. Continuing the upper respiratory infection example, if the patient with the upper respiratory infection visits his doctor again on day 17 and is treated for pneumonia, the episode would reset to 90 days, i.e. the time period assigned to pneumonia. See JA 562 (“If a record is assigned to an episode and its diagnosis denotes an increase in the episode’s severity causing the episode to shift to another ETG, the time window is then reset to the clean period of the new ETG.”). Thus, the total time period for the episode in this example would be 107 days.

When the later processed claims data adds another claim to the episode but does not shift the episode to a more severe condition, the time period also resets to 0, but restarts the originally assigned time period. See ’897 patent, 19:11-14 (“Subsequent episodes of the same nature within a window reset the window for an additional period of time until the patient is asymptomatic for a pre-determined time period....”) Keeping with the previous example, if the patient visits his physician on day 17 of his initial 30 day period for upper respiratory infection, but the data reflects the patient was still only treated for an upper respiratory infection, the time period resets to 0 and counts up to an additional 30 days. The total episode of care in this instance would be 47 days.

The court must determine whether the ordinary meaning of reset is sufficient, or whether to construe this term using the limitations suggested by Cave. Cave first proposes including the triggering event for a reset in the construction of the term. Specifically, Cave proposes the limitation of “[w]hen the next claim line item processed has a date of service within the defined time period and associated with the episode.” Ingenix argues that adding a triggering event to the construction of reset would be improper because the triggering event is expressly covered by other claim language. For example in Claim 1 of the ’560 patent, the triggering event is specified as “when later presented medical claim data having the at least one characteristic of the episode of care and falling within the first clean period is added to the episode of care.” Similarly, Claim 21 of the ’897 patent adds the “step of resetting the predefined time window of the medical episode when a second at least one of the plurality of data records matches an open medical episode....”

The court agrees that the claim language sufficiently covers the triggering event for a reset, and

that including a triggering event in the construction of reset itself would be improper. Therefore, the court declines to adopt the limitation of “when the next claim line item processed has a date of service within the defined time period and associated with the episode.”

Cave next proposes that reset requires construction to explain the concept of starting a predefined time period over. Both parties agree that “reset” means to start a time period over. But they disagree on the inclusion of a predefined time period in the term’s construction. Again, other claim language makes clear that the time period for the later processed claims data is predefined. See ’560 patent 40:57-60 (“resetting the first clean period to define a second clean period, the second clean period defining a second predefined time duration, wherein the first clean period is reset to the second clean period”); ’897 patent 35:56-60 (“step of resetting the predefined time window of the medical episode when a second at least one of the plurality of data records matches an open medical episode....”). Appending this claim language to the construction of reset would thus be improper.

The court agrees with Ingenix that the plain meaning of “reset” is sufficient. As the parties agree, to reset is to start over. The claims use this term in the way suggested by its plain and ordinary meaning. Therefore, the court declines to construe this term.

### 3.2.4. “Dynamic Time Window”

<u>Cave</u>	<u>Ingenix</u>
A predefined period assigned to a clinical condition associated with an episode that resets when claim data for service within the episode is received, and, when the next claim line item processed indicates a change in clinical condition, shifts to the pre-defined period assigned to that new clinical condition	A time period that can change based upon receipt of related claim records within a predefined time period

The dynamic time window is the backbone of Ingenix’ technology. Prior to Mr. Dang’s invention, the ETG Program was not capable “of accurately grouping claims to clinically homogeneous and statistically stable episode treatment groups and shifting the groupings for changed clinical conditions as would be required by healthcare providers.” JA 561, Dang Aff. ¶ 4. By creating “dynamic time windows,” in which the episode’s time period could change based on changes in in the medical claims data, Mr. Dang was able to more accurately capture the length of a patient’s treatment for a certain clinical condition. While the parties agree that in essence, a dynamic time window is a time period assigned to an episode that can change, they disagree as to how that change should be captured in the term’s construction. Particularly, the parties dispute whether the concepts of shifting and resetting need be included in the construction of dynamic time window.

Cave argues that Mr. Dang explicitly included shifting as an inseparable element of the dynamic time window in order to skirt around the on-sale bar issue during patent prosecution. To support its assertion Cave points to the following portions of the ’897 patent file history:

- “Mr. Dang conceived of the concepts of dynamic time windows, i.e., changing the time frame during which claims may group to an episode upon presentation of a medical claim having a date of service within the clean period for the episode, and shifting episodes upon changes in the clinical condition, on or about August 24, 1994....” JA 556.
- “[B]etween November 1993 and July 1994 the ETG Program in its developmental versions was neither performing nor capable of performing its intended purpose of grouping claims based on medical episodes and shifting for changes in clinical conditions.” JA 553 (citing Dang. Aff. ¶ 4).
- “In August 1994 Mr. Dang conceived of a new ETG construct that first chronologically groups each claim record into an ETG episode having a specific clean period, and then, if a later presented claim record warrants, based upon the diagnosis or treatment coded on the later presented claim, potentially shifts the episode into another ETG to reflect the patient’s changed condition.” JA 553.

- “The episode’s clean period for the purposes of grouping the next record thus could be reset to a new ETGs [sic] specific clean period. Hence, the window of time in which records could group to an episode can change as each record is grouped, i.e. it is dynamic. Thus, the use of the dynamic time window allows for the shifting of an episode from one ETG to another ETG to reflect a patient’s changed condition.” Id.
- “If a record is assigned to an episode and its diagnosis denotes an increase in the episode’s severity causing the episode to shift to another ETG, the time window is then reset to the clean period of the new ETG. Hence, in this respect, the time window could be referred to as dynamic.” JA 562, Dang Aff. ¶ 5.

As reflected in these citations, the inventor and his counsel indisputably address shifting and the dynamic time window together. However, Cave’s reading of the file history is flawed because it conflates the two concepts. The file history makes clear that while shifting can facilitate a dynamic time window, it is not necessary. In the first section above cited by Cave, Mr. Dang’s attorney explained that Mr. Dang conceived of the “concepts” of “dynamic time windows” and “shifting episodes upon changes in the clinical condition.” The pluralization of “concepts” implies that dynamic time windows and shifting are not one in the same. Nor are they inextricably linked. In the third citation above, Mr. Dang’s attorney explains that the invention “first” groups each claim record, and then “potentially shifts” the episode “if” a later record warrants it. The conditional language here makes clear that shifting is a step that can, but does not have to, occur when building episodes.

The patent specification also makes clear that the dynamic time window can be employed without a shift. For instance, in the case where a patient visits the doctor with an upper respiratory infection and is assigned to an episode of care having a 30 day period, but visits the doctor again for his respiratory infection on day 17, the time window resets to another 30 day period, creating a 47 day period total. In this scenario, no shift in clinical condition has occurred, but the time period has changed. See ’897 patent, 19:10-13 (“Subsequent episodes of the same nature within a window reset the window for an additional period of time until the patient is asymptomatic for a pre-

1 determined time period....”). In this sense, the dynamic time window has operated wholly apart  
2 from the concept of shifting.

3 The dynamic time window does, however, facilitate shifting. In creating a way for the  
4 episode’s assigned time period to change, “the dynamic time window allows for the shifting of an  
5 episode from one ETG to another ETG to reflect a patient’s changed condition.” JA 553. Taking  
6 again the example of the patient who visits the doctor with an upper respiratory infection and is  
7 assigned a 30 day time window, if that patient on day 17 visits his doctor with pneumonia, the time  
8 window changes to 90 days. This change in the time window allows for a shift in episode from  
9 upper respiratory infection to pneumonia. That the dynamic time window facilitates shifting, a  
10 separate feature of the technology, is nevertheless insufficient to support Cave’s argument that  
11 shifting is a necessary component to the construction of dynamic time window.

12 It is not quite as simple, however, to separate the concept of resetting from the concept of  
13 the dynamic time window. For the dynamic time window to be “dynamic,” it has to change. That  
14 change, as described in the file history and as practiced in Ingenix’ product, occurs through the  
15 resetting of time periods assigned to episodes when additional claims data so requires. Counsel for  
16 Ingenix suggests that a time window may be dynamic in ways apart from resetting, presenting the  
17 example of an insurance company that would like to assign different time periods to sequential  
18 office visits such that the first visit receives a 30 day time period, the second visit 20 days, and the  
19 third visit 15 days. Tutorial/Markman Hr’g Tr. 48:10-19, Aug. 9, 2012, Dkt. No. 82. While the  
20 court recognizes that this kind of dynamic time window may be possible, it disagrees with Ingenix  
21 that the file history supports this broader reading. Mr. Dang and his attorneys repeatedly referred  
22 to the time window as being “dynamic” because of its ability to reset. See JA 553, 561-62. The  
23 construction of “dynamic time window” therefore may properly include the reset limitation.

#### 24 Construction

25 The court adopts a modified version of Ingenix’ construction. “Dynamic Time Window”  
26 shall mean “a time period that can reset based upon receipt of related claim records within a  
27 predefined time period.”  
28



### 3.2.5. Episode of Care

<u>Cave</u>	<u>Ingenix</u>
All claims data for the treatment of a patient's medical condition incurred within a specified period of time	A group of all healthcare services provided to a patient for the diagnosis, treatment, and aftercare of a specific medical condition(s) within a period of interest

The term “episode of care” appears in both the Seare patents and the Cave patent. The parties agree that the term should be construed in connection with the Ingenix patents, and that the construction should be the same for the Cave patent.<sup>2</sup> Dkt. No. 66 at 16:7-9. The parties fundamentally disagree on whether “episode of care” should be defined by the healthcare services provided to a patient, or the claims data reflecting the treatment of the patient’s condition.

When a patentee acts as his own lexicographer and clearly sets forth a definition of a disputed claim term in the specification or the prosecution history, that express definition governs. CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002). The ’079 patent specification states that “[a]n episode of care is generally considered to be all healthcare services provided to a patient for the diagnosis, treatment, and aftercare of a specific medical condition.” ’079 patent 21:3-6. In a response to the PTO, the inventor Jerry Seare affirmed that an episode of care is defined by the collection of services provided to the patient. JA 1881 (“An episode of care is defined as ‘all healthcare services provided to the patient for the diagnosis, treatment and aftercare of a specific medical condition.’”). Thus from the intrinsic record it appears that the inventor has provided a definition for this term.

Cave argues that despite this evidence, using healthcare services instead of claims data as the anchor of the term’s construction would result in a construction completely divorced from the

<sup>2</sup> Despite the parties’ agreement, they each briefed “episode of care” twice—once for the Cave patent, and once for the Ingenix patents. This court has set a ten term limit for claim construction. Neither party filed for leave to designate additional terms pursuant to EJD Standing Order for Patent Cases § III.B and Local Rule 7-11(b). Therefore, the court will only construe “episode of care” based on the parties’ arguments regarding that term as it appears in the Ingenix patents.

context of the invention. Because claims data—not healthcare services—actually build the episodes of care, Cave argues, claims data must also be the basis of the term’s construction. The intrinsic record here does not support Cave’s assertions. The inventor clearly expressed a definition for this term. He included it as part of the patent specification, and quoted that same definition in a response to the PTO. In both instances, the inventor defined the term episode of care by the healthcare services a patient receives. Accordingly, “episode of care” shall be construed using healthcare services.

### Construction

The court adopts Ingenix’ construction. “Episode of Care” shall mean “A group of all healthcare services provided to a patient for the diagnosis, treatment, and aftercare of a specific medical condition(s) within a period of interest.”

### **3.2.6. “Episode Treatment Group”**

<u>Cave</u>	<u>Ingenix</u>
All claims data for the treatment of a patient’s medical condition incurred within a specified period of time	A group of medical condition(s) that have clinically similar cause(s), treatment(s), and/or diagnos(es)

The term “episode treatment group” (“ETG”) appears throughout the claims of the Dang patents and describes the basic analytical unit of the Dang invention. ’897 patent, 6:13-19. The ’897 patent specification states that “[a]n episode treatment group (ETG) is a clinically homogeneous and statistically stable group of similar illness etiology and therapeutic treatment.” ’897 patent, 6:17-19. This description appears similar to that of an episode of care, a term found in both the Seare and the Cave patents, which is “all healthcare services provided to a patient for the diagnosis, treatment, and aftercare of a specific medical condition.” ’079 patent, 21:3-6. Ingenix contends that the two concepts are separate. Cave believes them to be identical.

Ingenix emphasizes that an episode treatment group is defined as a group of medical conditions, whereas an episode of care is defined by a group of medical services. To highlight this

distinction, Ingenix points to Table 1 in the '897 patent, which is a list of 558 episode treatment groups . '897 patent 9:33 and Table 1 9-18.

TABLE 1

## ETG DESCRIPTION

- |   |   |
|---|---|
| 1 | AIDS with major infectious complication                             |
| 2 | AIDS with minor infectious complication                             |
| 3 | AIDS with inflammatory complication                                 |
| 4 | AIDS with neoplastic complication, with surgery                     |
| 5 | AIDS with neoplastic complication, w/o surgery                      |
| 6 | HIV sero-positive without AIDS                                      |
| 7 | Major infectious disease except HIV, with comorbidity               |
| 8 | Septicemia, w/o comorbidity.  |
| 9 | Major infectious disease except HIV and septicemia, w/o comorbidity |

The first entry on this table, for example, is ETG 1 – “AIDS with major infectious complication.”

That entry and all that follow it describe clinical conditions, rather than the services provided to the patient for treatment of a clinical condition. In contrast, as discussed in the previous section, an episode of care describes the collection of treatments a patient receives for a certain clinical condition.

Cave argues that, despite the difference in definitions, the two concepts are functionally the same. For instance, Cave points to Claim 3 of the '897 patent, which states:

The process as claimed in claim 1 wherein the step (e) further includes the step of classifying the patient records into at least one of a plurality of episode treatment groups each of the episode treatment groups being defined by an episode treatment category.

'897 patent 34:32-36

While the claimed processes use the same building material (patient records), the final products (episode treatment groups and episodes of care) are not the same. It is clear from the patent language that the process claimed in the Dang patent produces an analytical unit defined by medical conditions, and the process claimed in the Seare patents and used in the Cave patent produces a unit defined by medical services.

Furthermore, the two concepts have already been distinguished in the '079 patent file history. The '079 patent, which utilizes episodes of care, describes the use of “Index Codes.” In a

response to the PTO dated January 25, 2002, Seare, the inventor, described the creation of episodes of care as relying on Index Codes stating:

The process of generating an episode of care for a particular general diagnosis involved processing the records from a patient's history that relate to the Index Code corresponding to such general diagnosis.

JA 1881.

Seare went on to compare these Index Codes to the episode treatment groups found in the Dang patents:

The present invention uses Index Codes for the same reason that the Dang 5,835,897 ("Dang") uses Episode Treatment Groups (ETG's), i.e., to group diagnosis codes entered by a doctor on a medical claim form, or other record being used to create episodes of care, into a smaller number of categories that can be considered equivalent for episode of care purposes.

Id. at 1882.

Seare certainly understood the concept of episodes of care, and clearly separated that concept from episode treatment groups. Based on this description, if episode treatment groups are identical to anything, it would be Index Codes, not episodes of care. The court therefore declines to conflate the two concepts in its construction.

### Construction

The court adopts Ingenix' construction. "Episode Treatment Group" shall mean "a group of medical condition(s) that have clinically similar cause(s), treatment(s) and/or diagnos(es )."

### **3.2.7. "Episode Treatment Category"**

<u>Cave</u>	<u>Ingenix</u>
A table of related diagnosis and treatment codes consolidated into pre-defined medical conditions	A classification that includes one or more Episode Treatment Groups

The term “episode treatment category” appears in both the Dang ’897 patent and the Seare ’079 patent file history. Claim 1 of the ’897 patent provides:

(d) grouping the validated at least one of a plurality of data records to an episode treatment category based upon the pre-defined relationship, each episode treatment category having a dynamic time window defining a time period during which validated at least one of plurality of data records may be grouped to an episode treatment category.

’897 patent 34:22-28.

The ’079 file history explains that an episode treatment category is a “designator for a particular medical diagnosis or condition, e.g. acute bronchitis.” JA 1881.

Cave proposes adding two limitations to the term episode treatment category. First, Cave proposes that the medical conditions must be predefined. Second, Cave proposes limiting the term’s construction to a “table” defining the relationship between treatment codes and diagnoses.

The court declines to adopt Cave’s interpretation for similar reasons to those set forth in other sections of this Order. Particularly, other claim language makes sufficiently clear that episode treatment categories are made based on predefined relationships. See ’897 patent, Claim 1. Additionally, while Cave argues that “it is inherent from the specification that the ‘predefined relationship’ is in the form of a table,” (Cave Resp. Br. 23, Dkt. No. 71) it fails to point the court to any particular portion of the specification which would require that interpretation. As discussed in Section 3.2.1., though the preferred embodiment does reference look-up tables, Cave has failed to supply the court with evidence suggesting that tables are the exclusive embodiment. Therefore, Cave’s proposed limitations are improper and the court will adopt Ingenix’ construction.

#### Construction

The court adopts Ingenix’ construction. “Episode Treatment Category” shall mean “a classification that includes one or more Episode Treatment Groups”

**IT IS SO ORDERED.**

Dated: June 7, 2013

  
EDWARD J. DAVILA  
United States District Judge